

Translation

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>103-1034</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416																									
International application No. <b>PCT/JP2004/002397</b>	International filing date (day/month/year) <b>27.02.2004</b>	Priority date (day/month/year) <b>05.03.2003</b>																								
International Patent Classification (IPC) or national classification and IPC   																										
<p>Applicant <b>ASAHI KASEI CHEMICALS CORPORATION</b></p>																										
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <b>4</b> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s))             _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </tbody> </table>			<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/002397

## Box No. I

## Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- international search (Rule 12.3 and 23.1(b))
  - publication of the international application (Rule 12.4)
  - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):
- the international application as originally filed/furnished
- the description:  
pages \_\_\_\_\_ as originally filed/furnished  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- the claims:  
nos. \_\_\_\_\_ as originally filed/furnished  
nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- the drawings:  
sheets \_\_\_\_\_ as originally filed/furnished  
sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3.  The amendments have resulted in the cancellation of:
- the description, pages \_\_\_\_\_
  - the claims, nos. \_\_\_\_\_
  - the drawings, sheets/figs \_\_\_\_\_
  - the sequence listing (specify): \_\_\_\_\_
  - any table(s) related to sequence listing (specify): \_\_\_\_\_
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- the description, pages \_\_\_\_\_
  - the claims, nos. \_\_\_\_\_
  - the drawings, sheets/figs \_\_\_\_\_
  - the sequence listing (specify): \_\_\_\_\_
  - any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/002397

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims <u>1 - 7</u>	YES
	Claims _____	NO
Inventive step (IS)	Claims <u>1 - 7</u>	YES
	Claims _____	NO
Industrial applicability (IA)	Claims <u>1 - 7</u>	YES
	Claims _____	NO

**2. Citations and explanations (Rule 70.7)**

Document 1: JP 60-166037 A (Nitto Chemical Ind. Co., Ltd.), 29 August 1985

The inventions set forth in claims 1 to 7 are novel and involve an inventive step in relation to document 1 cited in the international search report.

Document 1 discloses fluidized bed catalysts for use in the ammonoxidation of a propylene or the like, which are configured by spray drying and then calcinating a mixed slurry that comprises compounds such as antimony, iron, molybdenum and bismuth, etc., and a mixture of two types of silica gel that have different particle diameters. In addition, the particle diameters and the blending ratios of the two types of silica sol, the range of calcination temperatures, the compositional ratios of the catalyst components and the content of the carrier silica which are disclosed in document 1 overlap with the specifications in the claims of the present application (claims 1, 6 and 8; page 3, upper right column, line 8 to lower left column, line 17; and page 5, lower right column, lines 9 to 10).

However, document 1 does not make any disclosures in relation to the pore distribution of said catalyst,

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
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Box No. V

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

and does not suggest that there is a relationship between the pore distribution and both the particle diameters and the blending ratios of the abovementioned silica sols. In addition, the particle diameters and blending ratios of the silica sols that are disclosed in document 1 include a large number of values that do not conform to the particle diameters and blending ratios that are set forth in claim 3 of the present application; likewise, the examples of document 1 do not include a configuration which conforms to the specifications in claim 3 of the present application. Therefore, even if the production method is taken into consideration, the pore distributions of the catalysts that are disclosed in document 1 cannot be said to conform to the specifications in claim 1 of the present application.

On the other hand, the catalysts set forth in claim 1 of the present application exhibit an increased product yield and a superior catalyst strength as a result of the specified pore distribution; therefore, said catalysts can be considered to exhibit superior effects in comparison to the catalysts that are disclosed in document 1.

As a result, the inventions set forth in claims 1 to 7 would not have been obvious in the light of document 1 and would not have been easy to invent, even for a person skilled in the art.